YAMAHA

EtherSound® INTERFACE CARD

MY16-ES64

ENGLISH
DEUTSCH
FRANÇAIS
ESPAÑOL
ITALIANO
中文
日本語

OWNER'S MANUAL
BEDIENUNGSANLEITUNG
MODE D'EMPLOI
MANUAL DE INSTRUCCIONES
MANUALE DI ISTRUZIONI
使用说明书
取扱説明書

EN
DE
FR
ES
IT
ZH
JA

FCC INFORMATION (U.S.A.)

1. **IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!**
   This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.
2. **IMPORTANT:** When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.
3. **NOTE:** This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

   Relocate either this product or the device that is being affected by the interference.

   Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

   In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to co-axial type cable.

   If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Corporation of America, Electronic Service Division, 6600 Orangethorpe Ave, Buena Park, CA90620

   The above statements apply ONLY to those products distributed by Yamaha Corporation of America or its subsidiaries.

* This applies only to products distributed by YAMAHA CORPORATION OF AMERICA. (class B)

COMPLIANCE INFORMATION STATEMENT (DECLARATION OF CONFORMITY PROCEDURE)

Responsible Party : Yamaha Corporation of America
Address : 6600 Orangethorpe Ave., Buena Park, Calif. 90620
Telephone : 714-522-9011
Type of Equipment : EtherSound INTERFACE CARD
Model Name : MY16-ES64

This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions:
1) this device may not cause harmful interference, and
2) this device must accept any interference received including interference that may cause undesired operation.
See user manual instructions if interference to radio reception is suspected.

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This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CANADA

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

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• Ceci ne s'applique qu'aux produits distribués par Yamaha Canada Musique Ltée.

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(class b korea)

PRECAUTIONS

PLEASE READ CAREFULLY BEFORE PROCEEDING

* Please keep this manual in a safe place for future reference.

⚠ *WARNING*

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following:

- Before installing the card in an audio device please check to make sure that the device is compatible with the card and check possible restrictions regarding the maximum number of Yamaha and third-party expansion cards that can be simultaneously installed. Refer to the owner's manual supplied with the audio device, and/or the Yamaha Pro Audio web site at:
  http://www.yamahaproaudio.com/
- Do not install the card in any Yamaha products not specified by Yamaha for use with the card to avoid possible electrical shock, fire, or equipment damage.
- Do not attempt to disassemble or modify the card. Do not apply excessive force to card connectors or other card components. Mishandling of the card may lead to shock, fire hazard, or equipment failure.
- Be sure to disconnect the power cable of the host device before installing the card and connecting/disconnecting the cables (in order to eliminate shock hazard, undesired noise, and avoid equipment damage).
- Turn off all peripheral devices connected to the host device before installation, and unplug all related cables.

⚠ To customers using an MY16-EX card

Be sure to turn off host devices BEFORE plugging or unplugging the Ethernet cables that connect to a master card such as the MY16-ES64 or other MY16-EX cards.

Plugging or unplugging the cables while power to the devices is on may result in serious noise.

⚠ *CAUTION*

Always follow the basic precautions listed below to avoid the possibility of physical injury to you or others, or damage to the device or other property. These precautions include, but are not limited to, the following:

- Be sure to properly ground the host device to prevent electrical shock and/or malfunction.
- Do not touch the metallic leads (pins) of the circuit board when handling the card. The pins are sharp and may cause hand cuts.
- Wear a pair of heavy gloves during installation to avoid scratching or cutting your hands on sharp edges.
- Avoid touching exposed connectors and metal parts to minimize the possibility of bad connections.
- Drain all static electricity from your clothing and body before handling the card. Static electricity can damage the card. Touch an exposed metal part of the host device or other grounded object beforehand.
- Do not drop the card or subject it to physical shock as this can result in breakage and/or malfunction.
- Do not drop screws or other small parts inside the card. If power is applied while screws or similar metal objects are loose inside the unit the card may malfunction or be damaged. If you cannot retrieve dropped objects yourself, refer the problem to qualified Yamaha service personnel.

Yamaha cannot be held responsible for damage caused by improper use or modifications to the device, or data that is lost or destroyed.

- The illustrations as shown in this Owner's Manual are for instructional purposes only, and may be different from the ones on your equipment.
- Ethernet is a trademark of Xerox Corporation.
- EtherSound is a registered trademark of Digigram S.A.
- The company names and product names in this Owner's Manual are the trademarks or registered trademarks of their respective companies.

ENGLISH

Introduction

Thank you for purchasing the Yamaha MY16-ES64 EtherSound® interface card. MY16-ES64 is an EtherSound® card for use with compatible Yamaha professional audio equipment.

Using the MY16-ES64 with a maximum of three MY16-EX Yamaha I/O expansion cards allows transmission and reception of up to 64 channels (in/out) of uncompressed digital audio signals when running at a sampling frequency of 48 kHz or 44.1 kHz.

About the host devices in which the MY16-ES64 can be installed

Before installing the card in a host device, please refer to the Yamaha Pro Audio web site for the latest information on the compatible host devices in which the card can be installed.

Yamaha Pro Audio web site:
http://www.yamahaproaudio.com/

EtherSound Firmware Update

The EtherSound firmware can be updated from a computer connected to the EtherSound connector.

Information about the latest versions and firmware downloads are available at the AuviTran website:
http://www.auvitran.com/

Installation information

Please refer to the owner's manual supplied with the host device for installation information.

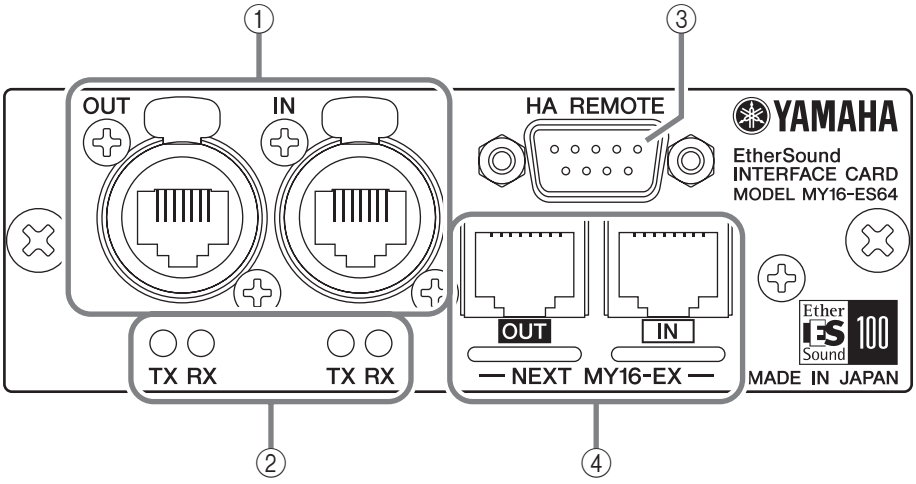
As well as securing the card in place, the fixing screws at the left and right of the card function as electrical grounds. Be sure to screw them in tightly.

Accessories

Owner's Manual

Part Names and Functions

■ Panel



① EtherSound [IN][OUT] Connectors

These are RJ-45 connectors that you can connect to other EtherSound devices or to a computer using an Ethernet cable. Use "AVS-ESMonitor," AuviTran's application software, to make settings for control and/or digital audio signal transmission and reception.

NOTE:

- *Use RJ-45 connectors that are compatible with Neutrik's etherCON CAT5®.*
- *Use an STP (Shielded Twisted Pair) cable to prevent electromagnetic interference. Also, firmly fasten the metal portion of the connector to the shield of the cable using conductive tape, etc.*
- *For more details on EtherSound specifications and the length of available cables, refer to the following website. http://www.ethersound.com/*

About AVS-ESMonitor

AVS-ESMonitor is application software made by the AuviTran SARL for the purpose of monitoring and controlling an EtherSound system. It allows you to make various EtherSound settings such as input/output routing. For details, refer to the following web site.
http://www.auvitran.com/

② IN/OUT[TX][RX] Indicators

Each corresponding indicator blinks when EtherSound [IN]/[OUT] connectors transmit or receive signals. When the [Identify] button for the MY16-ES64 is selected from the AVS-ESMonitor, all four of these indicators blink and will continue blinking until selected a second time.

③ [HA REMOTE] Connector

This is a D-sub 9-pin connector that enables remote control of a Yamaha AD8HR or AD824 AD converter via EtherSound. In most situations, you will connect to the [REMOTE] connector of the host device using a serial cross cable. If you use a host device, such as Yamaha digital mixer LS9, which is capable of remotely controlling directly via a slot connection, you do not need to connect this [HA REMOTE] connector to the host device.

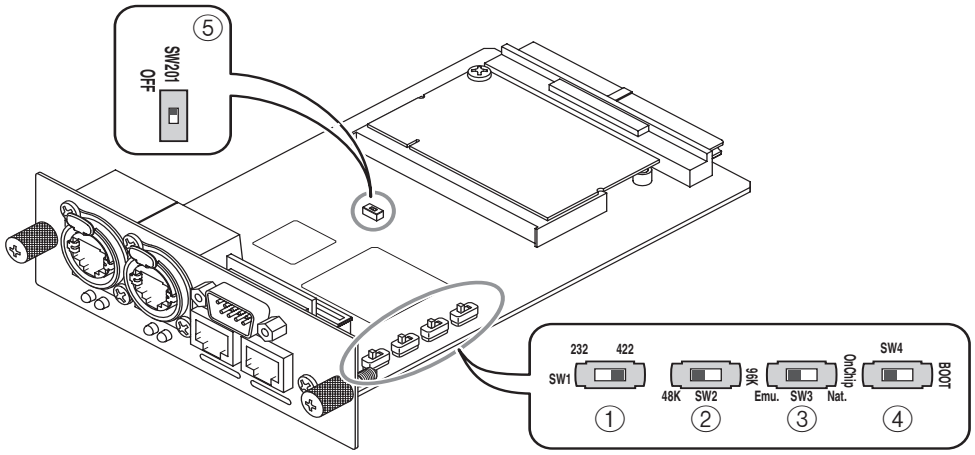
④ [NEXT MY16-EX IN][NEXT MY16-EXOUT] Connectors

These RJ-45 connectors can be connected via an Ethernet cable (CAT5e or higher category) to the [MASTER SIDE IN] or [MASTER SIDE OUT] connector of the Yamaha MY16-EX I/O expansion card for transmission and reception of the audio and word clock signals.

NOTE:

- *Use an STP (Shielded Twisted Pair) cable to prevent electromagnetic interference. Using a UTP (Unshielded Twisted Pair) cable may cause noise or cut off sound. Also, be sure to attach the ferrite core included with the MY16-EX to a location close to the cable plug connected to the [NEXT MY16-EX OUT] connector.*
- *Do not use cables that feature protective boots for their plugs as they could come in contact with the cable connected to the [HA REMOTE] connector.*

■ Switches



Set these switches as appropriate for your situation and for the device in which the card is installed.

① Signals via [HA REMOTE] Connector (SW1)

Mode	Position
RS-232C	232
RS-422	422

Typically set this switch to the [422] position. When you connect the [HA REMOTE] connector to a computer, set this switch to the [232] position.

② Sampling Frequency (SW2)

Mode	Position
44.1/48 kHz	48K
88.2/96 kHz	96K

NOTE:

This card supports only Double Speed mode when running at 88.2/96kHz. (Double Channel mode is not supported.)

③ Card ID (SW3)

Mode	Position
Emulation	Emu.
Native	Nat.

Typically set this switch to the [Emu.] position. If you set this switch to the [Emu.] position and switch ② (SW2) to the [48K] position, the host device will recognize the card as a Yamaha MY16-AT digital I/O card. If you set this switch to the [Emu.] position and switch ② (SW2) to the [96K] position, the host device will recognize the card as a Yamaha MY8-AE96 digital I/O card. If you install the card in a host device whose firmware supports the MY16-ES64, setting this switch to the [Nat.] position enables you to make best use of the MY16-ES64 function.

④ Operation Mode (SW4)

Typically set this switch to the [OnChip] position. You will set this switch to the [BOOT] position to update the firmware in the future.

⑤ SW201

Leave this switch permanently set to the [OFF] position during use. Please do not change this setting. Otherwise the card will not operate properly.

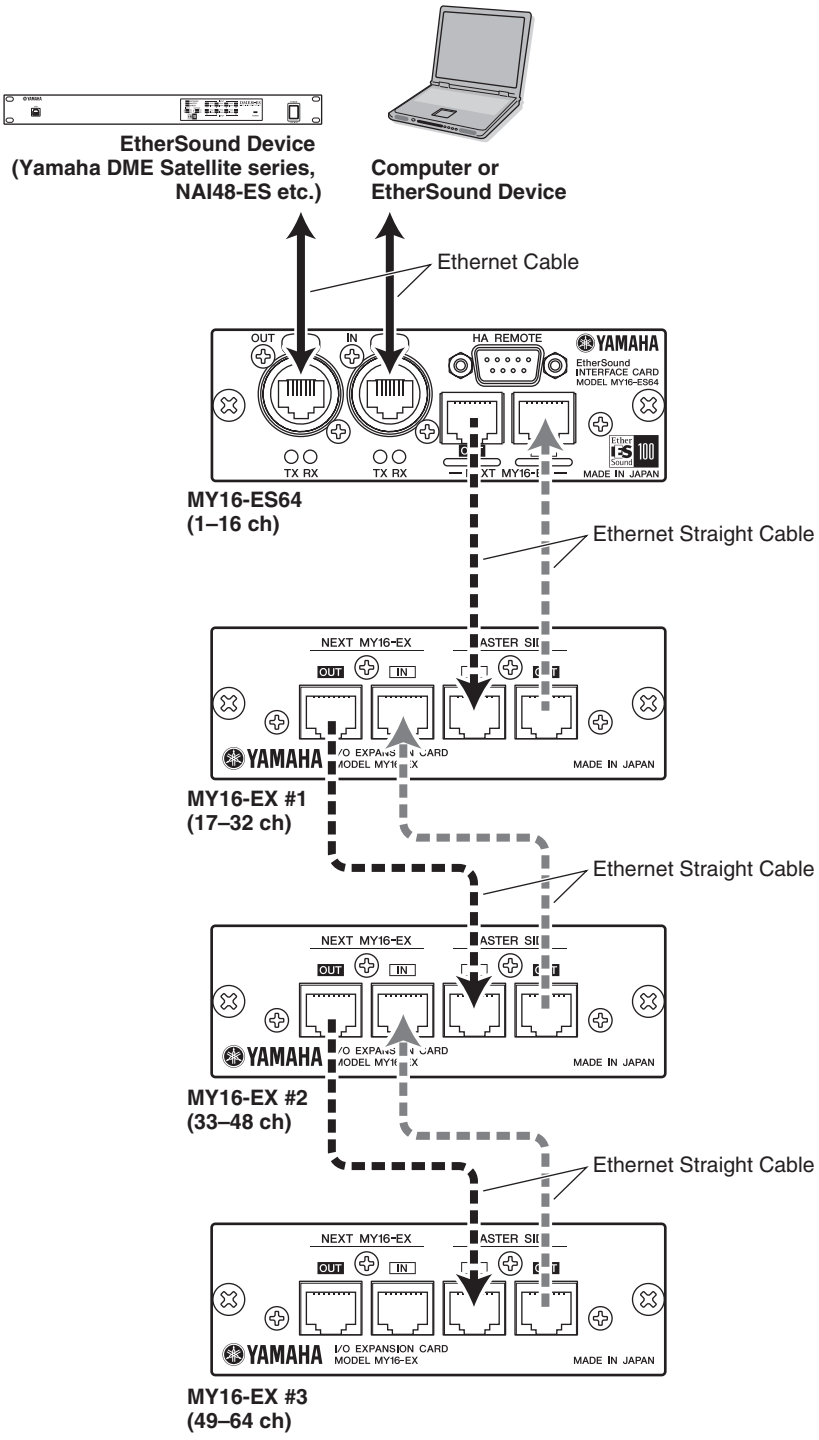
Word Clock Master Settings on the host devices

The word clock master settings will differ as per the following chart, depending on whether the MY16-ES64 card(s) (that are not a primary master) have been installed in the same device as the primary master MY16-ES64 card.

	Primary Master	Other than Primary Master
If installed in different devices	Select other than "SLOT"	Select "SLOT"
If installed in the same device	Select other than "SLOT"	

* SLOT: Indicates the slot in which the MY16-ES64 is installed.

Connection Example



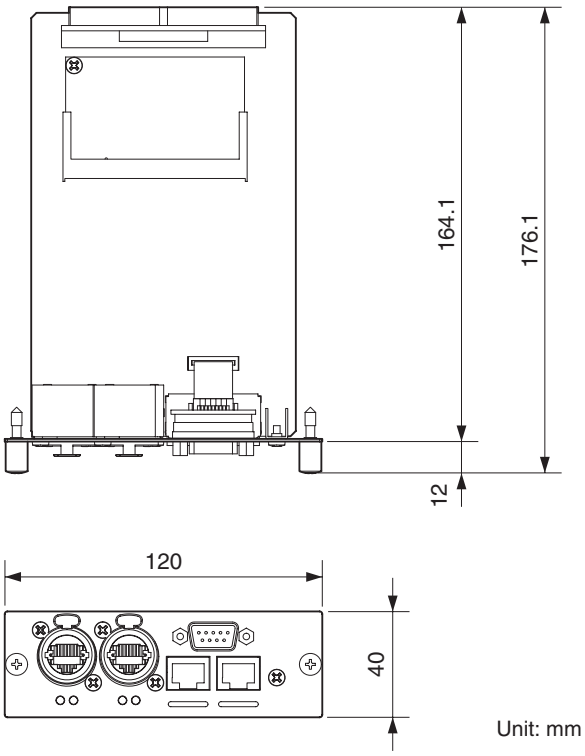
Appendix

Connector Pin Assignment

HA REMOTE

Pin No.	Signal Name	Pin No.	Signal Name
1	N.C.	6	RX+
2	RX–	7	RTS
3	TX–	8	CTS
4	TX+	9	N.C
5	GND		

Dimensions



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Conforms to Environments: E1, E2, E3 and E4

Europäische Modelle
Käufer/Benutzerinformationen nach EN55103-1 und EN55103-2.
Entspricht den Umgebungen: E1, E2, E3 und E4

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Les informations d'achat/utilisation sont décrites dans les documents EN55103-1 et EN55103-2.
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M1S 3R1, Canada
Tel: 416-298-1311

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Yamaha Corporation of America
6600 Orangethorpe Ave., Buena Park, Calif. 90620,
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Tel: 714-522-9011

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